

Jacob, Rebecca (ASRC)

415788

From: Mellerson, Kendra
Sent: Wednesday, October 09, 2002 4:20 PM
To: STIC-ILL
Subject: FW: ill request

-----Original Message-----

From: Soderquist, Arlen
Sent: Wednesday, October 09, 2002 2:51 PM
To: STIC-EIC1700
Subject: ill request

Arlen Soderquist AU 1743 308-3989 CP3-7A11
Serial No. 09/409644 Needed by 10-17-02
Abstract

L22 ANSWER 168 OF 520 CA COPYRIGHT 2002 ACS
AN 127:302684 CA

TI Low frequency a.c. response of **polypyrrole gas sensors**

AU Musio, Fernando; Ferrara, Maria Cristina
CS PASTIS-CNRS, SS7 per MESAGNE Km 7.300, Brindisi, 72100, Italy
SO Sensors and Actuators, B: Chemical (1997), B41(1-3), 97-103
AB Elec. **conducting** org. polymers change their **cond.** and relative permittivity when exposed to **volatile** chems. The changes depend on the frequency, the concn. and the type of the chem. In particular the frequency dependence could be used for making more selective **sensors**. A **polypyrrole** (PPY) film **gas sensor** was designed and constructed in order to probe it. The low frequency (20 Hz-10 KHz) a.c. response was studied when it was exposed to 200 ppm of four different **vapors**: methanol, acetone, Et acetate and ethanol. Response patterns to each **vapor** were obtained by varying the measurement frequencies. The pattern for each **vapor** investigated was very different from the others, and so it has been possible to discriminate between them. The results demonstrate that it is possible to increase the **sensor** selectivity using the low frequency a.c. response rather than d.c. resistance change. Ageing and temp. dependence of resistance and capacitance are also reported.

COMPLETED

Mellerson, Kendra

From: Soderquist, Arlen
Sent: Wednesday, October 09, 2002 2:54 PM
To: STIC-EIC1700
Subj ct: ill request

Arlen Soderquist AU 1743 308-3989 CP3-7A11
Serial No. 09/409644 Needed by 10-17-02
Abstract

L22 ANSWER 160 OF 520 CA COPYRIGHT 2002 ACS

AN 128:26127 CA

TI Development of an electronic nose

AU Barisci, Joseph N.; Andrews, Mike K.; Harris, Paul; Partridge, Ashton C.; Wallace, Gordon G.

CS Intelligent Polymer Res. Inst., Univ. Wollongong, 2522, Australia

SO Proceedings of SPIE-The International Society for Optical Engineering (1997), 3242 (Smart Electronics and MEMS), 164-171

AB A system for detection of **volatile** compds. has been developed based on the concept of an electronic nose. The detection mechanism relies on the change in elec. resistance that occurs when a **conducting** polymer **sensing element** is exposed to the **gaseous** sample. An array of such **sensors** in conjunction with pattern recognition data anal. are used to identify and quantify the compds. of interest.

TRIBS.P54